



The Female Athlete Triad



As we approach the 21st century the future of women sports is bright. Opportunities for women athletes of all levels are significantly increasing. There is an increasing personal awareness of the benefits of a lifetime of health and fitness. The “Female Athlete Triad” is an issue unique to female athletes and active girls and women the world over.

In 1992 the American College of Sports Medicine coined the term, the Female Athlete Triad. This triad consists of disordered eating, amenorrhea and osteoporosis. Recognition of this disorder was made after patterns of increased incidence of these interrelated disorders were detected in many female athletes.

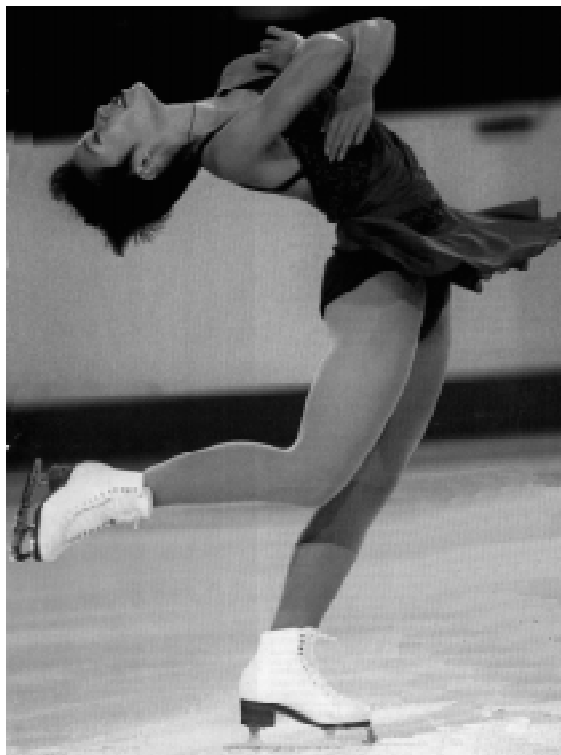
The Female Athlete Triad is a serious syndrome which may occur in elite

athletes as well as physically active girls and women who participate in various sporting activities. The adverse effects related to this syndrome include a decline in physical performance and in some cases illness or death. As healthy adults we need to be aware of our risk of developing this syndrome and recognize its progression in others.

Disordered eating is particularly prevalent in appearance sports such as gymnastics, figure skating, diving or ballet where emphasis is placed on body image. Any excessive control of caloric intake such as: bingeing, purging, moderate/severe food restriction, use of diet pills or laxatives are behaviors associated with disordered eating. There is a

common belief among many women that weight loss will lead to increased success in sport. However, excessive weight loss as a result of an eating disorder will actually lead to a decrease in performance, amenorrhea (loss of menstrual cycle) and premature bone loss.

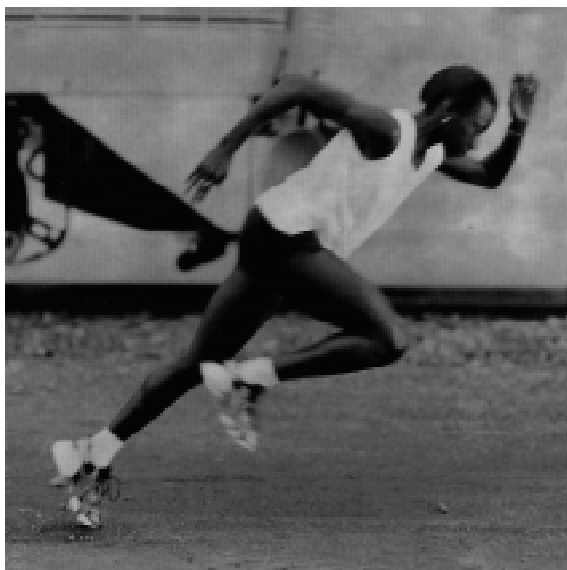
Amenorrhea presents itself as part of the cycle of the triad. Amenorrhea may be defined as delayed menarche, a decrease in the number of menstrual cycles per year or the complete cessation of the menstrual cycle. Excessive exercise combined with caloric restrictions leave female athletes at a higher risk of developing amenorrhea. Estrogen levels have been shown to decrease in amenorrheic women leading to the third disorder of the female athlete triad, osteoporosis.



Osteoporosis is a result of a decrease in bone mineral density. In the “true” female athlete triad this bone loss is usually significant, premature and irreversible. Osteoporosis will leave an athlete extremely susceptible to stress fractures.

The physical demands of most sports require an individual to be dedicated, hard working, critical and competitive. These characteristics combined make a great athlete yet they are also distinctive of the female athlete triad. As female athletes continue to strive for excellence in their respective sports while maintaining, “ideal” weight ranges and a competitive edge on their opponents, it is important not to overlook the signs and symp-

toms of the triad. Parents, coaches, certified athletic trainers, doctors and fitness & health professionals should recognize the triad and take multidisciplinary measures to prevent the occurrence of the female athlete triad so women may continue to excel in all aspects of sport and exercise.



Resources for those seeking help may contact:

RehabWorks
O&C, Room 1103
Mail Code Bio-10
Kennedy Space Center, FL 32899
(407) 867-7497
(407) 867-1144 (fax)

Web Site
<http://rehabworks.ksc.nasa.gov>